

## AMENDMENTS

### In the Claims:

Please add the following new claims:

-- <sup>97</sup>~~49.~~ A sequencing chip plate comprising an array of microchips, each of said microchips comprising an array of oligonucleotide probes immobilized on the surface of each of said microchips.

*B.2*  
<sup>99</sup>~~50.~~ The plate of claim <sup>97</sup>~~49~~, wherein said oligonucleotide probes are RNA or DNA probes.

*Rule 126*  
<sup>99</sup>~~51.~~ The plate of claim <sup>97</sup>~~49~~, wherein said plate is a 96-well plate.

<sup>100</sup>~~52.~~ The plate of claim <sup>97</sup>~~49~~, wherein said oligonucleotide probes are between about 4 and about 9 base pairs in length.

<sup>101</sup>~~53.~~ The plate of claim <sup>100</sup>~~52~~, wherein said oligonucleotide probes are 4 base pairs in length.

<sup>102</sup>  
~~54.~~ The plate of claim <sup>101</sup>~~53~~, wherein said oligonucleotide probes are 5 base pairs in length.

<sup>103</sup>  
~~55.~~ The plate of claim <sup>100</sup>~~52~~, wherein said oligonucleotide probes are 6 base pairs in length.

<sup>104</sup>  
~~56.~~ The plate of claim <sup>100</sup>~~52~~, wherein said oligonucleotide probes are 7 base pairs in length.

<sup>105</sup>  
~~57.~~ The plate of claim <sup>100</sup>~~52~~, wherein said oligonucleotide probes are 8 base pairs in length.

<sup>106</sup>  
~~58.~~ The plate of claim <sup>100</sup>~~52~~, wherein said oligonucleotide probes are 9 base pairs in length.

<sup>107</sup>  
~~59.~~ The plate of claim <sup>97</sup>~~49~~, wherein said oligonucleotide probes are attached to a plurality of supports made of nylon, glass, polystyrene or teflon, and said plurality of supports are immobilized on said microchips.

<sup>108</sup>  
~~60.~~ The plate of claim <sup>107</sup>~~59~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via phosphodiester linkage.

<sup>109</sup>  
~~61.~~ The plate of claim <sup>107</sup>~~59~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via a light-activated synthetic mechanism.

<sup>110</sup>  
~~62.~~ The plate of claim <sup>97</sup>~~49~~, wherein said oligonucleotide probes are immobilized on said microchips via a biotin-streptavidin linker.

<sup>111</sup>  
~~63.~~ The plate of claim <sup>97</sup>~~49~~, wherein at least one of said oligonucleotide probes contains a modified or universal base.

B  
<sup>112</sup>  
~~64.~~ A method of making a sequencing plate comprising the steps of:

- (i) providing a plate having a plurality of wells;
- (ii) providing a plurality of microchips, each of said microchips comprising an array of oligonucleotide probes attached to each of said microchips; and
- (iii) disposing said plurality of microchips in said plurality of wells.

<sup>113</sup>  
~~65.~~ The method of claim <sup>112</sup>~~64~~, wherein said oligonucleotide probes are RNA or DNA probes.

<sup>114</sup>  
~~66.~~ The method of claim <sup>112</sup>~~64~~, wherein said plate is a 96-well plate.

<sup>115</sup>  
~~67.~~ The method of claim <sup>112</sup>~~64~~, wherein said oligonucleotide probes are between about 4 and about 9 base pairs in length.

<sup>116</sup>  
~~68.~~ The method of claim <sup>115</sup>~~67~~, wherein said oligonucleotide probes are 4 base pairs in length.

<sup>117</sup>  
~~69.~~ The method of claim <sup>115</sup>~~67~~, wherein said oligonucleotide probes are 5 base pairs in length.

<sup>118</sup>  
~~70.~~ The method of claim <sup>115</sup>~~67~~, wherein said oligonucleotide probes are 6 base pairs in length.

<sup>119</sup>  
~~71.~~ The method of claim <sup>115</sup>~~67~~, wherein said oligonucleotide probes are 7 base pairs in length.

<sup>120</sup>  
~~72.~~ The method of claim <sup>115</sup>~~67~~, wherein said oligonucleotide probes are 8 base pairs in length.

<sup>121</sup>  
~~73.~~ The method of claim <sup>115</sup>~~67~~, wherein said oligonucleotide probes are 9 base pairs in length.

<sup>122</sup>  
~~74.~~ The method of claim <sup>112</sup>~~64~~, wherein said oligonucleotide probes are attached to a plurality of supports made of nylon, glass, polystyrene or teflon, and said plurality of supports are immobilized on said microchips.

<sup>123</sup>  
~~75.~~ The method of claim <sup>122</sup>~~74~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via phosphodiester linkage.

<sup>124</sup>  
~~76.~~ The method of claim <sup>122</sup>~~74~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via a light-activated synthetic mechanism.

<sup>125</sup>  
~~77.~~ The method of claim <sup>122</sup>~~74~~, wherein said oligonucleotide probes are immobilized on said microchips via a biotin-streptavidin linker.

<sup>126</sup>  
~~78.~~ The method of claim <sup>112</sup>~~64~~, wherein at least one of said oligonucleotide probes contains a modified or universal base.

<sup>127</sup>  
~~79.~~ A sequencing microchip comprising an array of oligonucleotide probes, each of said probes having the same length and comprising all combinations of sequences for the length of said probe, wherein said probes are immobilized on the surface of said microchip.

<sup>128</sup>  
~~80.~~ The microchip of claim <sup>127</sup>~~79~~, wherein said oligonucleotide probes are attached to a plurality of supports made of nylon, glass, polystyrene or teflon, and said plurality of supports are immobilized on said microchips.

<sup>129</sup>  
~~81.~~ The microchip of claim <sup>128</sup>~~80~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via phosphodiester linkage.

<sup>130</sup>  
~~82.~~ The microchip of claim <sup>128</sup>~~80~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via a light-activated synthetic mechanism.

<sup>131</sup>  
~~83.~~ The microchip of claim <sup>128</sup>~~80~~, wherein said oligonucleotide probes are immobilized on said microchips via a biotin-streptavidin linker.

<sup>132</sup>  
~~84.~~ The microchip of claim <sup>127</sup>~~79~~, wherein said oligonucleotide probes are between about 4 and about 9 base pairs in length.

<sup>133</sup>  
~~85.~~ The microchip of claim <sup>132</sup>~~84~~, wherein said oligonucleotide probes are 4 base pairs in length.

<sup>134</sup>  
~~86.~~ The microchip of claim <sup>132</sup>~~84~~, wherein said oligonucleotide probes are 5 base pairs in length.

<sup>135</sup>  
~~87.~~ The microchip of claim <sup>132</sup>~~84~~, wherein said oligonucleotide probes are 6 base pairs in length.

<sup>136</sup>  
~~88.~~ The microchip of claim <sup>132</sup>~~84~~, wherein said oligonucleotide probes are 7 base pairs in length.

<sup>137</sup>  
~~89.~~ The microchip of claim <sup>132</sup>~~84~~, wherein said oligonucleotide probes are 8 base pairs in length.

<sup>138</sup>  
~~90.~~ The microchip of claim <sup>132</sup>~~84~~, wherein said oligonucleotide probes are 9 base pairs in length.

<sup>139</sup>  
~~91.~~ The microchip of claim <sup>127</sup>~~79~~, wherein at least one of said oligonucleotide probes contains a modified or universal base.

<sup>140</sup>  
~~92.~~ A method for making a sequencing microchip comprising the steps of:

- (i) providing an array of oligonucleotide probes, each of said probes having the same length and comprising all combinations of sequences for the length of said probe; and

(ii) immobilizing said probes on the surface of said microchip.

<sup>141</sup>  
~~93.~~ The method of claim ~~92~~<sup>140</sup>, wherein said oligonucleotide probes are attached to a plurality of supports made of nylon, glass, polystyrene or teflon, and said plurality of supports are immobilized on said microchips.

<sup>142</sup>  
~~94.~~ The method of claim ~~93~~<sup>141</sup>, wherein said oligonucleotide probes are immobilized on said plurality of supports via phosphodiester linkage.

<sup>143</sup>  
~~95.~~ The method of claim ~~93~~<sup>141</sup>, wherein said oligonucleotide probes are immobilized on said plurality of supports via a light-activated synthetic mechanism.

<sup>144</sup>  
~~96.~~ The method of claim ~~93~~<sup>141</sup>, wherein said oligonucleotide probes are immobilized on said microchips via a biotin-streptavidin linker.

<sup>145</sup>  
~~97.~~ The method of claim ~~92~~<sup>140</sup>, wherein said oligonucleotide probes are between about 4 and about 9 base pairs in length.

<sup>146</sup>  
~~98.~~ The method of claim ~~97~~<sup>145</sup>, wherein said oligonucleotide probes are 4 base pairs in length.



<sup>147</sup>  
~~99.~~ The method of claim ~~97~~<sup>145</sup>, wherein said oligonucleotide probes are 5 base pairs in length.

<sup>148</sup>  
~~100.~~ The method of claim ~~97~~<sup>145</sup>, wherein said oligonucleotide probes are 6 base pairs in length.

<sup>149</sup>  
~~101.~~ The method of claim ~~97~~<sup>145</sup>, wherein said oligonucleotide probes are 7 base pairs in length.

<sup>150</sup>  
~~102.~~ The method of claim ~~97~~<sup>145</sup>, wherein said oligonucleotide probes are 8 base pairs in length.

<sup>151</sup>  
~~103.~~ The method of claim ~~97~~<sup>145</sup>, wherein said oligonucleotide probes are 9 base pairs in length.

<sup>152</sup>  
~~104.~~ The method of claim ~~92~~<sup>140</sup>, wherein at least one of said oligonucleotide probes contains a modified or universal base.

<sup>153</sup>  
~~105.~~ A method for making a sequencing chip comprising the steps of:  
(a) providing a body comprising a plurality of wells defining spaces;

- (b) providing a chip comprising on its surface a plurality of oligonucleotide probe arrays, each oligonucleotide probe array comprising a collection of oligonucleotide probes, at least two of which are different, arranged in a spacially defined and physically addressable manner;
- (c) attaching the wafer to the body so that the oligonucleotide probe arrays are exposed to the spaces of the wells.

*B1 Concl'd*  
<sup>154</sup>  
~~106.~~ The method of claim <sup>153</sup>~~105~~, wherein the probes are DNA or RNA molecules.

<sup>155</sup>  
~~107.~~ A method for making a sequencing chip comprising the steps of providing a chip comprising on its surface a plurality of oligonucleotide probe arrays, each oligonucleotide probe array comprising a collection of oligonucleotide probes, at least two of which are different, arranged in a spacially defined and physically addressable manner, and applying a material resistant not the flow of a liquid sample so as to surround the oligonucleotide probe arrays.

<sup>156</sup>  
~~108.~~ The method of claim <sup>155</sup>~~107~~, wherein the probes are DNA or RNA molecules. --

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